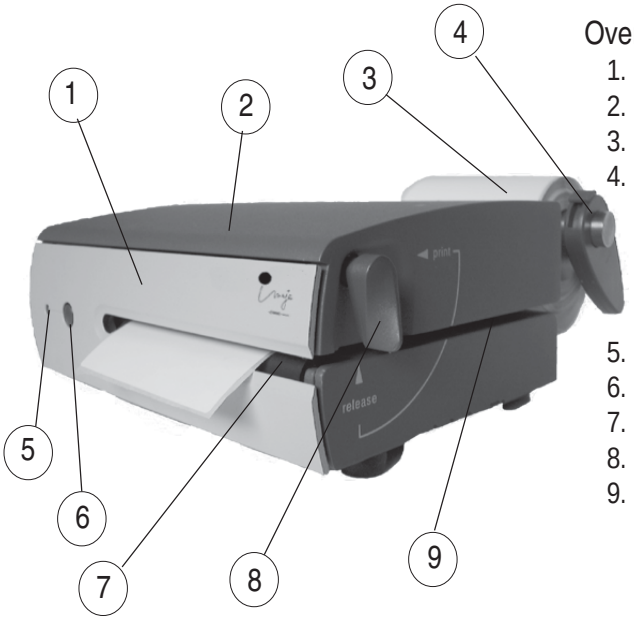
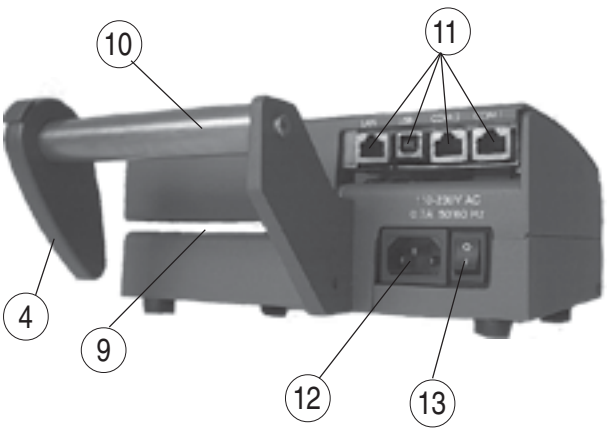
Operators guide

MP Compact4

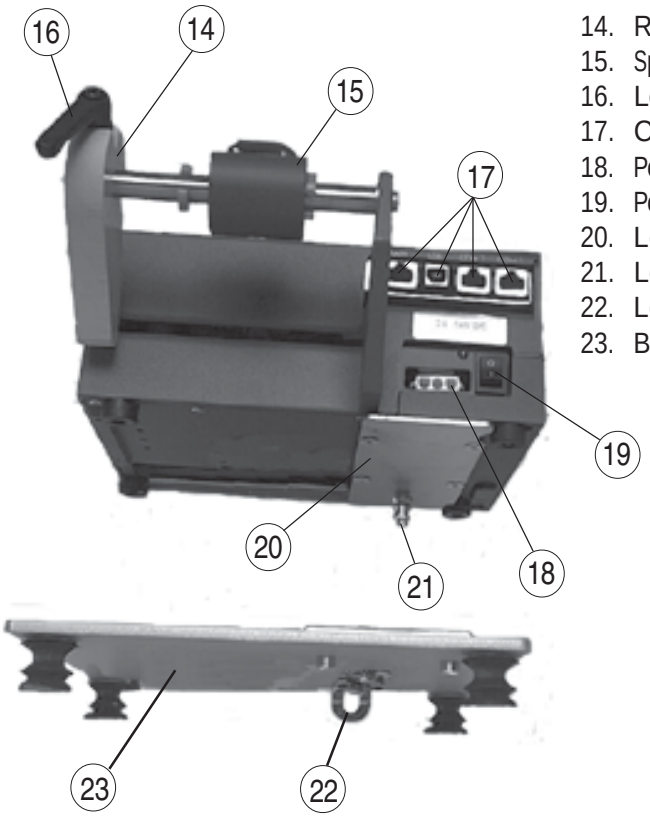


Overview

1. Front cover
2. Top cover
3. Media roll
4. Roll guide
5. Status lamp
6. Print button
7. Print roller
8. Release lever
9. Paper path



10. Spindle
11. Communication ports
12. Power connection
13. Power switch



MP Compact4 Mobile

14. Roll guide
15. Spool
16. Locking handle
17. Communication ports
18. Power connection
19. Power switch
20. Lock plate
21. Lock guide
22. Lock clips
23. Bottom plate

Safety instructions

This symbol is used to notify the reader of situations requiring special attention.

- Ensure that the power switch is off when connecting to the socket.

The user is only authorized to carry out tasks which are covered by this manual. For any other tasks users are to refer to a qualified service technician or supplier.

Dimensions & Weight for base model			
Width:	230 mm	Height:	105 mm
Depth:	260 mm	Weight:	3.5 kg

- Ensure that the power cable is disconnected before opening the printer.

CAUTION

DOUBLE POLE/NEUTRAL FUSING

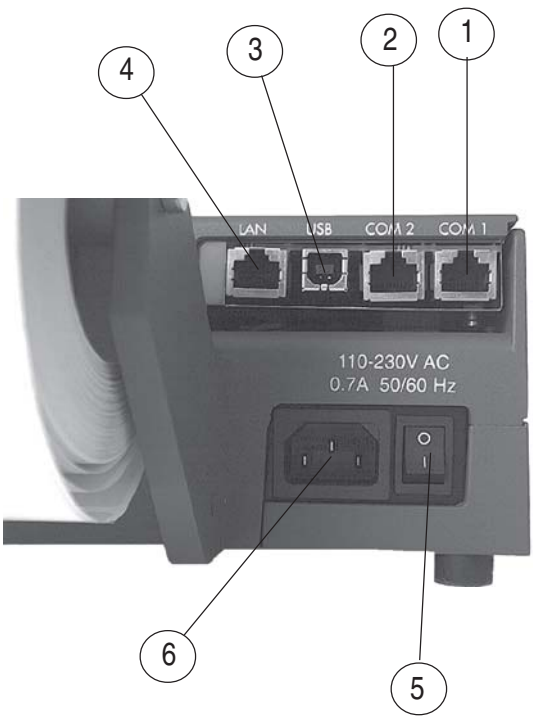
When cleaning or changing the print head do not use any sharp objects.

- Don't use any sharp objects to remove labels from the print roller.

Required tools
- A pen or other pointed tool
- Pozidrive 1 screwdriver
- Allen keys 1-5 mm
- Flat head screwdriver max 2.5 mm

- Do not use cables longer than 5 m for serial data communication. This may result in data being lost or corrupted. This is especially important in environments which are prone to high levels of electronic interference.

Connection



To a computer or server
1. COM1
2. COM2
3. USB
4. Ethernet/LAN
5. Power switch
6. Power connection

Before connecting any cables to the printer ensure that the power cable is not connected.

The printer is equipped with serial connections: 300-115 000 baud (COM 1, COM 2). Ethernet TCP/IP and USB.
USB will only work with Windows 2000 or later versions.

Use shielded cables and do not place them parallel to the power cable.

- Connect the cables.

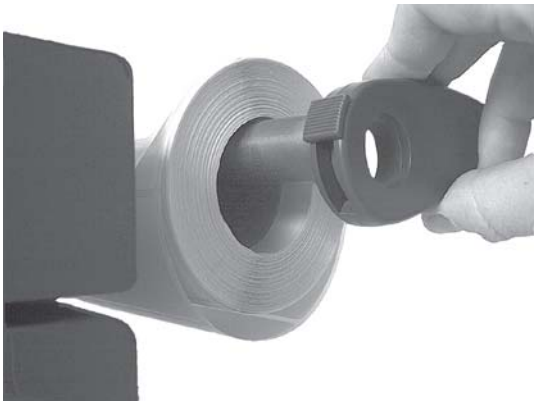
• Always ensure that the cables are connected to the correct port!

- Connect the power cable to an earthed socket.

Power consumption of the base model
Maximum consumption: 0.7 A
Standby 45 mA (10-12W)

The printer shall be connected to an earthed socket when the power cable is connected.

Changing media



Base model
The printer stops automatically when it is out of media.
This is indicated by an LED, the status lamp will indicate red.

- Turn the release lever to lift the printhead.

- Remove the roll guide and the empty media spool if applicable.

- Insert a new roll of media, as far to the left as possible.

- Insert the media roll from the side.

- Position and lock the roll guide.
- Turn the release lever to PRINT.

- Close the front cover.
- Feed through a blank label.
- Press the start button in order to find the correct media position.

The printer will automatically read the position of the media so that printing starts correctly.

Changing media

Printer equipped with cutter

- Pull out the locking pin.
- Fold down the cutter.

• Follow the instructions for the base model.

- Feed the end of the media roll through the cutter.
- Pull out the locking pin and fold back the cutter.
- Feed through a blank label.
- Press the start button in order to find the correct media position.

The printer will automatically read the position of the media so that printing starts correctly.

Changing media

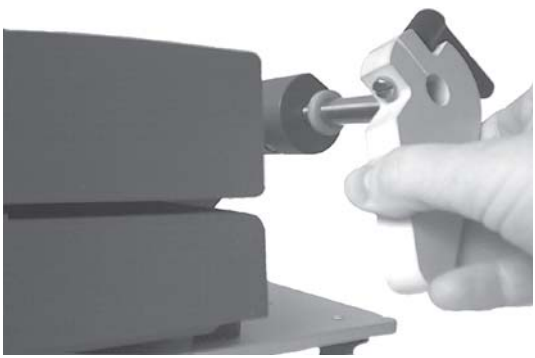
Printer with Peel-Off kit

Follow the instructions for the base model.

- Remove several labels from the carrier paper.

Feed the media

- behind the lower part of the front cover
- through the reeling pins
- Pull the reeling device counter-clockwise in order to increase tension of the carrier paper.
- Press the start button in order to find the correct media position.



MP Compact4 Mobile

The roller guide is blocked by a locking device, which enables the printer to be used in a vertical position in a mobile environment.

- Turn the release lever to lift the printhead.
- Remove the roll guide.
- Insert a new media roll.
- Feed in from the side of the printer.
- Insert roll and lock the roll guide.
- Turn the release lever to PRINT.
- Feed through a blank label.
- Press the start button in order to find the correct media position.

The printer will automatically read the position of the media so that printing starts correctly.

Cleaning

Base model
- Turn the release lever to lift the printhead.
- Remove the media roll.

• Use the special cleaning cloths provided.

- Feed in the cloth in the same manner as the media.

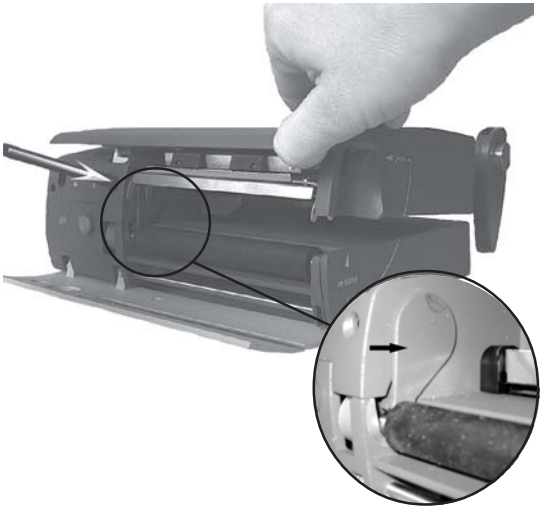
- Turn the release lever to PRINT.
- Hold on to the cloth.
- Start the printer by pressing the red print button.
- Keep holding on to the cloth for several seconds (the roller is cleaned).
- Let go of the cloth (the print head is cleaned).

Discard the cleaning cloth.

Printer with cutter
- Pull out the locking pin.
- Fold down the cutter.

• Follow instructions for the base model.

Changing the roller



Base model
- Open the front cover.

- Lift up the top cover by pressing carefully with a pen or similar on the catch.

- Loosen the locking plug.

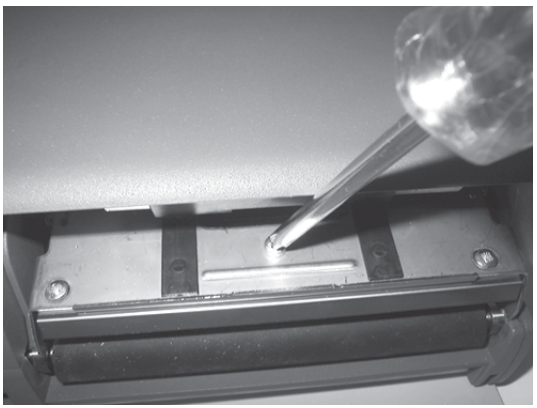
- Press on the roller with your thumb and move it to the left.
- Lift out the right hand part of the roller.

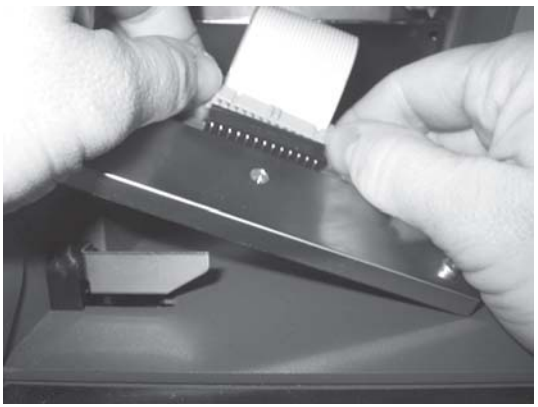
- Move the roller along the opening.
- Lift out the roller.

Replace roller in a reverse order.

• Ensure that the pinion engages the driving belt. The driving belt stretches when the roller is in the correct position.

Changing the print head





For information on the printer's status:
Conduct a test print
- Load the media.

Use an approximately 110 mm wide print width.
- Hold in the start button.
- Turn on the power switch.

A test print will occur.

Warning!
Before beginning any work on the printer ensure that the power cable is not connected.

- Open the printer.
- Turn the release lever to PRINT.
- Remove the retaining screw.
- Press carefully on the front part of the head so that the two screw heads become free.

- Carefully loosen the connector at the rear.

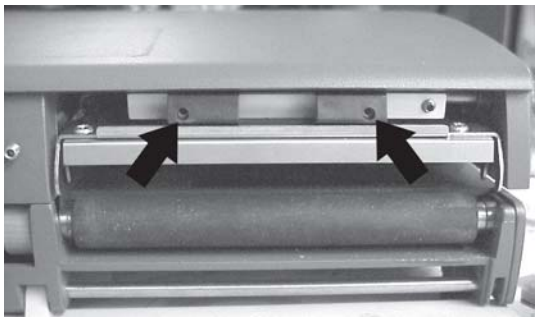
• **Handle the print head with care.**

- Mount the new print head.
- Insert the connector at the rear.
- Replace the retaining screw.
- Turn the release lever to lift the printhead.
- Close the printer.
- Feed in the media.
- Turn the release lever to PRINT.

• Ensure that the printed pattern is even across the entire width of the print surface. Any secondary adjustment should be made according to instructions in the "Print head adjustment" section.

- Exit test mode by shutting off the power switch.

Print head adjustment



Adjusting the print head pressure

Adjusting the pressure of the print head is necessary when using different types of media, e.g. labels, paper or tickets.

- Open the front cover.
- Turn the release lever to lift the printhead.

Use a small flathead screwdriver and turn the adjusting screws counter-clockwise in order to increase the pressure (about 0,5 - 1 turns).

For information on the printer's status:

Conduct a test print

- Load the media.

Use an approximately 110 mm wide print width.

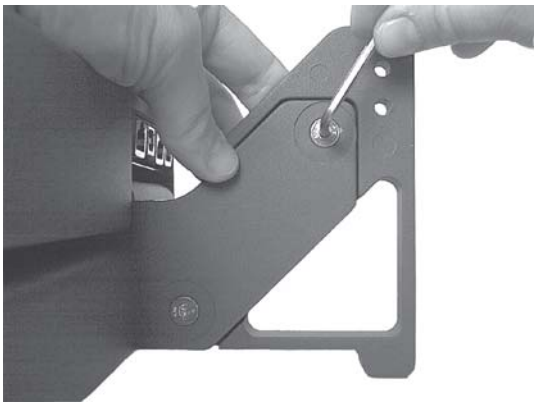
- Hold in the start button.
- Turn on the power switch.

A test print will occur

• Ensure that the printed pattern is even across the entire width of the print surface. Any secondary adjustment should be made according to instructions in the "Print head adjustment" section.

- Exit test mode by shutting off the power switch.

Accessories



150 mm kit
This accessory makes it possible to use a 150 mm media roll instead of a standard 100 mm roll.

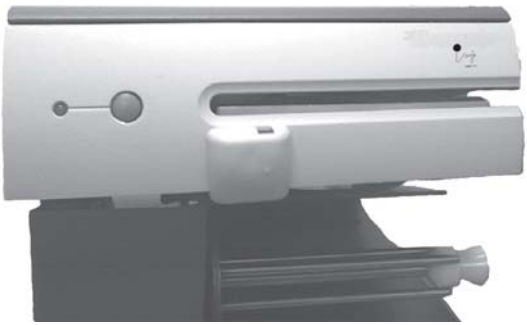
Mounting
- Unscrew the existing spindle.
- Install your 150 mm kit.

- Screw on the new spindle.

Peel-Off kit
The Peel-Off accessory separates lables from their carrier paper.
The carrier paper is rolled up under the printer.
This will only work with 100 mm rolls.

- This accessory may only be installed at the factory or by a qualified service technician.

Accessories



LTS kit

Label Taken Sensor, is most often used together with the Peel-Off kit. The photo cell controls the print out so that a new label is printed only after the previous label has been removed.

For installation contact a qualified service technician or your supplier.

Wall mounting

Enables wall mounting of the printer.

- Secure the mounting plate on the underside of the printer.

- Screw the guide securely to the wall plate.
- Mount the wall plate.
- Hang up the printer.

Accessories

Print Head Diagnostic (PHD)
Printers with an article number of 645130.02 or later can be equipped with PHD-Print Head Diagnostic. PHD warns against missing dots on the print head. PHD requires Labelpoint 4.49 or later versions.

- This accessory may only be installed at the factory or by a qualified service technician.

Tower Mounting kit
Two MP Compact4 printers can be stacked on top of eachother. This is a great solution in areas with a lack of space and in situations where printing of different types of media is required.

- For installation contact your supplier or a qualified service technician.

Accessories

Parallel cable

The parallel cable converts data from parallel to serial communication. The MP Compact4 is not equipped with a parallelport, but with the help of the cable, information can be sent via the computer's parallel port. The cable can be used with Win 95, 98 och NT 4.0. Two way communication with the help of parallelports is not possible when using NT 4.0.

Note!

The software in the MP Compact4 must be version 4.34 or later. The cable is Plug-and-Play compatible. When the computer finds a new unit, choose "new printer" and install the printer driver for MP Compact4. The printer driver and the latest version of the software can be found on our website: www.datamaxcorp.com

Connection

Important information!
The DC supply cable from the battery to the printer must not be placed closer than 50 cms to any other interface, e.g. radio antennas and communication cables with high noise levels. Alternatively, use a shielded DC-supply cable.

• If cables longer than 1 m are used, the cable diameter must be at least 2.5 mm. If the cable is shorter than 1 m a cable diameter of 1.5 mm will be sufficient.

- Connect the black cable to the negative pole of the power supply.

- Connect both the red cables to the positive pole of the power supply.

Note!
Both the red cables must be connnected to the positive pole (+).

Power supply specification for the MP Compact4 Mobile

Voltage

Input voltage:	24 - 48 Volt DC
Tolerance:	± 15%

Current at 24 V DC

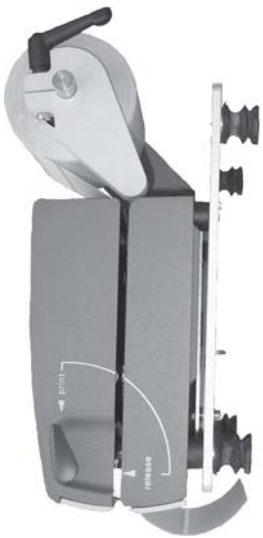
Max. current:	4 A, 100 % printing surface
Idle current:	250 mA

Mounting

Vertical mounting of the
MP Compact4 Mobile

Mount the bottom plate on the wall with the guide in the left corner.

When mounting the printer vertically it can be hung
- sideways
- with the media roll directed downward
- with the media roll directed upward



Never mount the printer so that the roll guide is pointing downward. This may cause the roll to fall off.

Battery power supply

MP Compact4 Mobile

Choosing the battery power supply

Printer usage determines the choice of battery power supply.
The battery capacity is counted in ampere-hours (AH) and is determined by the following factors:

- print speed
- black/white-balance
- supply voltage
- label size
- the number of printed labels per hour

In order to determine which battery that shall be used P_{ave} must first be established.

P_{ave} indicates the average power consumption during printing.

When calculating P_{ave} determine the voltage (U) and the average black/white balance in %. For most purposes 25 % is a suitable value. Thereafter, the formula below can be used.

P_{ave} = Supply voltage (U) x A(constant) x (black/white-balance in %) + W(constant)

A (constant) gives the actual consumption when printing in 100 % black (choose the value from the table which corresponds to the applicable supply voltage).
W (constant) gives the current which is consumed when the printer is switched on but without printing taking place (choose the value from the table which corresponds to the applicable supply voltage).

black/white-balance / Supply voltage	100 % black A (constant)	50 % black	25 % black	0 % black W (constant)
24 V	*4 A*	*2 A*	*1 A*	*10 W*
48 V	*2 A*	*1 A*	*0,5 A*	*12 W*

Power consumption

Once $\mathbf{P_{ave}}$ has been determined **the energy consumption (AH)** can be calculated. Energy consumption determines the type of battery to be used.

Determine
- number of labels per hour
- label length
- print speed (mm/s)

Thereafter, the formula below can be used.

Energy consumption (AH) = $\mathbf{P_{ave}}$ x (number of labels per hour) x $\frac{\text{(label length/print speed)}}{3600}$

Example

In an application the following has been determined
- 50 labels per hour
- Label length 200 mm
- Print speed 60 mm/s

with a *black/white-balance of 25 %*.
The applicable power source is a 24 V DC-battery. By using the table on the previous page it is clear that W(constant) is 10 W for a 24 V DC-power supply for the printer.
According to the formula, P_{ave} will be

$\mathbf{P_{ave}}$ = Supply voltage (U) x A(constant) x (black/white-balance in %) + W(constant)

$\mathbf{P_{ave}}$ = 24 x 4 x 0.25 + 10 = **34 Watt**

Energy consumption(AH) will then be:
Energy consumption (AH) =
(34 x 50 x (200 / 60)) / 3600 = 1.57 AH
If a 24 V DC-battery of 75 AH (ampere-hour) is chosen and the energy consumption (AH) applicable to the above figures is calculated to be 1.57 AH, the battery will last for 47.7 hours before it needs charging (75 / 1,57 = 47.7).

Trouble shooting

Problem	Measure
The printed item is greyish	Clean the print head and the roller. Check - paper quality. See *"Paper Parameter Settings"* in the printer's browser.
The printed item is uneven	Check - mechanical adjustments.
The printed item has vertical black or white lines?	Clean the print head. If the problem persists: change the print head.
The printed item is not visible	Check that - the release lever is turned to PRINT. - the correct type of media is being used.
Labels/paper do not feed out correctly	Check that - the media is correctly fed in the printer. If the problem persists: Adjust the photocell sensor with the help of the support program Startpoint. See the product manual.
The printer does not start	Check that - Power cable is connected. - Status lamp illuminates. - The communication cables are not damaged and are connected correctly.
If the problem persists	Contact service personnel or your supplier.